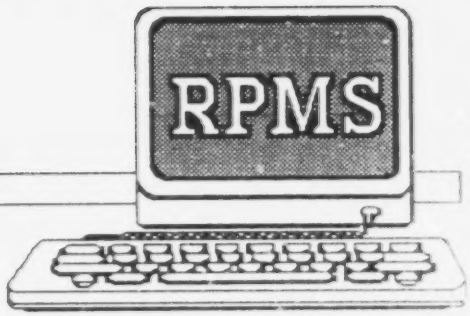
P 27/4



Indian Health Service manuals for RPMS system users

Patient Care Component

RPMS GENERAL OPERATIONS GUIDELINES

Version 1.0 - December 1988

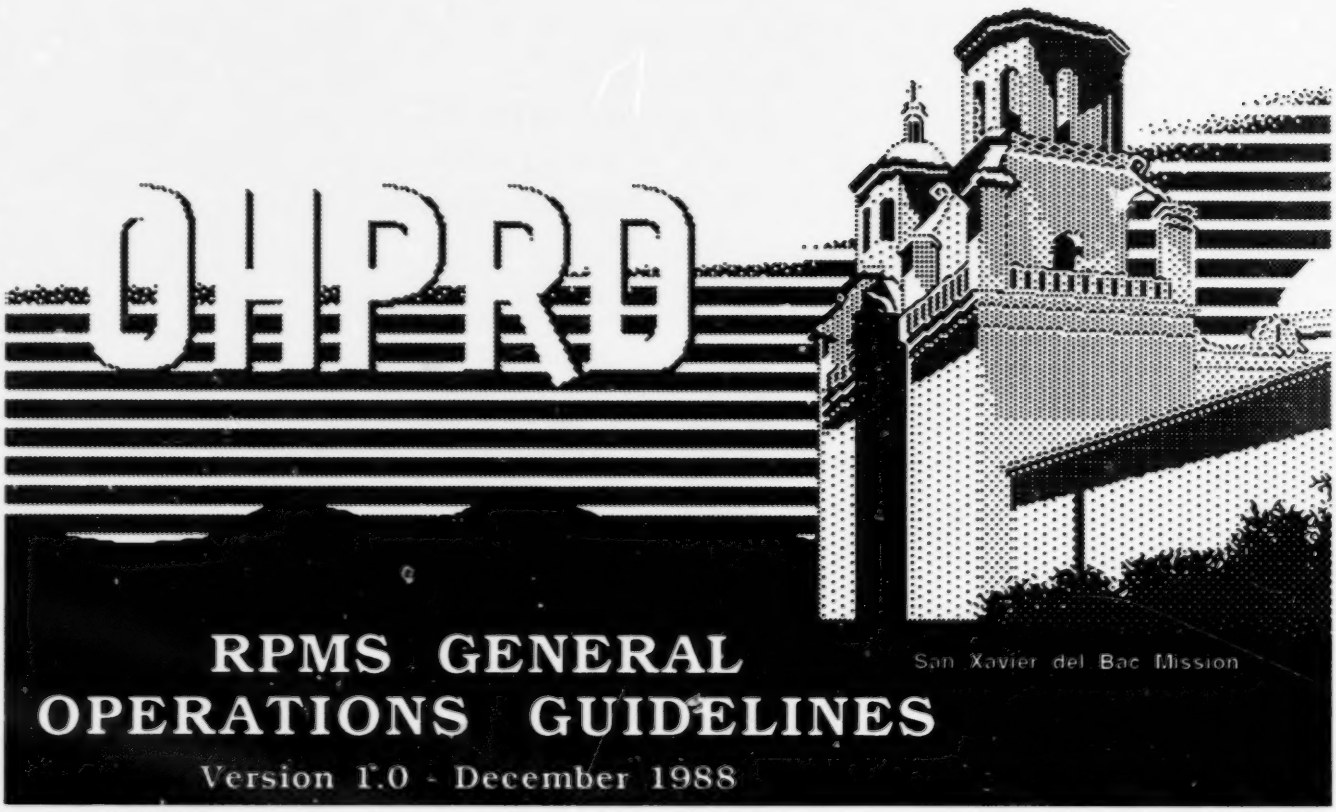
READEX FICHE best copy available

HE 20.9408:

Indian Health Service

Office of Health Program Research & Development

Information Systems Division
7900 So. J. Stock Road
Tucson, Arizona 85746-9352



San Xavier del Bac Mission

RPMS GENERAL OPERATIONS GUIDELINES

Version 1.0 - December 1988

RPMS General Operations Guidelines

This manual provides a complete description of RPMS General Operations Guidelines,
Version 1.0, December 1988

The complete set of PCC manuals is listed below:

- PCC Flier
- PCC Overview
- PCC Forms
- Health Summary
- Building a Health Summary
- Uses of the Health Summary (not currently available)
- PCC Reports
- Patient Register System
- Data Entry
- Data Transmission
- ICD Coding Subsystem
- Table Maintenance (not currently available)
- Forms Control (not currently available)
- Linkage to Other RPMS Components (not currently available)
- RPMS General Operations Guidelines

The manuals may be obtained from the

Information Systems Division
Office of Health Program Research and Development
Indian Health Service
7900 South J. J. Stock Road
Tucson, AZ 85746-9352

GENERAL OPERATIONS GUIDELINES

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RPMS GENERAL OPERATIONS GUIDELINES

PREFACE

PATIENT CARE COMPONENT
of the
RESOURCE and PATIENT MANAGEMENT SYSTEM

The Resource and Patient Management System (RPMS) of the Indian Health Service (IHS) is an integrated group of automated data systems designed to operate on computers located in any IHS or tribal health facility (i.e., hospital or full-time clinic). The system will also link health facilities to each other and to administrative units such as Area Offices. The primary objective is to integrate patient care and cost data in a single automated data processing system that collects and stores a core set of health and management data that cuts across disciplines and facilities. A typical RPMS configuration in a health facility might include these systems: Patient Registration, Pharmacy, Dental, Maternal and Child Health, Contract Health Services, Laboratory, and the Patient Care Component (PCC). This manual has been designed to accompany the **Patient Care Component**.

The PCC provides for the collection and storage, on local RPMS computers, of a broad range of health data resulting from inpatient, outpatient, and field visits at IHS, tribal, contract, and community sites. It is designed to support health care delivery, planning, management, and research. For health professionals, the PCC is a tool that assists in providing the type of care that addresses all of a patient's known health problems and preventive health needs. Planners use information such as the numbers of various types of visits and the reasons for these visits. Managers use aggregate information such as numbers of patients who have insurance and the types of insurance. Researchers use the information for a variety of locally designed projects. PCC data types include date, type, and location of visit; providers of service; measurements; diagnoses and procedures; health problems and treatment plans; personal and family history; reproductive factors; laboratory test results; and a variety of other health-related information. As do other RPMS components, the PCC utilizes the File Manager database management system for data storage.

KEY FEATURES of the PCC

Integrated Data Files

The PCC integrates data from multiple provider groups (e.g., clinicians, community health nurses, community health representatives) into a common set of files that link all data to a patient. It also features direct linkage with the RPMS Pharmacy, Maternal and Child Health, Laboratory, Inpatient Admission/Discharge/Transfer (ADT), and Dental Modules. As these modules capture data to support their department-specific operations, selected items are automatically passed into appropriate files for permanent storage and use by PCC programs. Ultimately, a patient's health information from multiple facilities will be integrated in the PCC database at each site where the patient has an active medical record.

Encounter Forms

The multipurpose PCC Ambulatory Encounter Record is the principal vehicle for entering data into the system. Its use reduces duplicate reporting and ensures accurate information in the PCC as well as the IHS national data systems. This multipart, carbonless form is used for most ambulatory provider-patient encounters. The original is placed in the patient's chart or family folder and copies are used for appointment slips, patient instructions, excuses from school or work, referrals to other providers, and for entry of data into the PCC. Use of the PCC Ambulatory Encounter Record replaces use of the Ambulatory Care Record Brief (HRSA-45-1), and when the PCC is implemented on the local computer, it also replaces the Ambulatory Patient Care (APC) form. In addition to the PCC Ambulatory Encounter Record, alternate forms are available to meet specific requirements. These include the Well Child Exam Record, Adult History and Physical Examination Record, Emergency Visit Record, Inpatient Supplement and Discharge Follow-Up Record, and the Multi-Visit Encounter Record.

Data Entry Module

A data entry module is included that features English language data entry from PCC encounter forms with automated coding of the data, where necessary, into IHS Standard Codes. For diagnoses and procedures, a computer-assisted coding module encodes all commonly used terms into the International Classification of Diseases (ICD9-CM) and, for more complex terms, searches all ICD narratives and offers choices of potentially correct codes to the data entry operator. Both the provider's narrative and the appropriate ICD9-CM codes are stored for all diagnoses, procedures, problems and treatment plans. The provider's narrative is used, however, for PCC output such as the Health Summary.

Health Summary

A principal output of the PCC is the Health Summary, which provides a structured and summarized overview of each patient's health history together with a problem list, laboratory test results, and most recent medications. A printed Health Summary is produced routinely whenever a patient is seen by a provider and is updated through the encounter forms. The Health Summary and the Ambulatory Encounter Record are used together to create and maintain a patient's active and inactive health problem list. Together they assist the provider in building a comprehensive plan for health care.

Local health care providers can easily design their own Health Summary formats using a menu-driven Health Summary Development Module. Providers may choose from among a variety of Health Summary components to develop customized clinic-specific or problem-specific summaries. The PCC is delivered to Service Units with four standard Health Summary formats: Adult Regular, Pediatric, Dental, and Immunization.

Registers

The PCC includes a menu-driven module that facilitates the establishment of rudimentary patient registers for user-selected categories such as diabetic patients, crippled children, high risk pregnancies, or patients with unmet surgical needs. With the Register Module, a user can enter patients into a register, update selected items to be monitored (last visit, next visit, risk factors), and print a list of patients on a given register.

Report Generation

A set of reports is included that allows users to select a report from a menu. Frequently used reports include discharge listings, medication listings, third party data, and patients with a specific diagnosis.

Data Transmission

A set of programs is included that extracts recent inpatient and ambulatory visit data and transmits the data to the IHS Data Center in Albuquerque for the generation of IHS inpatient and ambulatory patient care data.

On-Line Help Screens

In addition to providing operator and user manuals to accompany the PCC, the system contains numerous on-line Help Screens. The Help Screens briefly describe each menu option and are easy to access using question marks and keyword selections. Often a Help Screen is linked to additional screens that provide more detailed explanations.

Diagnosis Related Grouper

To assist in the collection of Medicare and Medicaid funds, and in the estimation of contract health care charges, a Diagnosis Related Grouper program is included that accepts the entry of diagnoses and procedures. It returns to the user a Diagnosis Related Group (DRG) value together with the IHS Weight and Average Length of Stay associated with that DRG. If multiple diagnoses and procedures are entered, the system will return all possible DRGs and their weights as if each diagnosis had been considered as the principal diagnosis. The DRG Grouper is linked to the Data Entry Module above; thus it permits entry of diagnoses and procedures in narrative terms or by ICD codes.

GENERAL OPERATIONS GUIDELINES

for

Data Entry Operators and Users

of the

PATIENT CARE COMPONENT

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RESOURCE and PATIENT MANAGEMENT SYSTEM

The Resource and Patient Management System (RPMS) of the Indian Health Service (IHS) is a group of related data systems designed to operate on computers located in any IHS or tribal health facility (i.e., hospital or full-time clinic). The system will eventually link health facilities to each other and to administrative units such as Area Offices. The primary objective is to integrate patient care and cost data in a single automated data processing system that collects and stores a core set of health and management data cutting across disciplines and facilities. A typical RPMS configuration in a health facility might include these systems: Patient Registration, Pharmacy, Dental, Maternal and Child Health, Contract Health Services, Laboratory, and the Patient Care Component (PCC). This manual has been designed to accompany the **Patient Care Component**. It assumes that you are using a Wyse terminal on an RPMS UNIX system.

GETTING STARTED

Security and User Identification

Before a user may use the computer, that person must be assigned an access code and a verify code. This is done by the local RPMS Site Manager.

These codes serve several functions. One of the most important is to insure that only authorized individuals will have access to the confidential information stored in the system. For this reason you should **never reveal your access codes to anyone else!** If you believe someone is using your access code to gain unauthorized access to the system, report this to your supervisor, the PCC Manager, or Site Manager at once.

Another function of your access code is to identify you to the system so that it can take you directly to the menu with which you normally work.

Setting Up

If your terminal is a Wyse Video Display Unit, it is turned on using the small rocker switch located at the front right-hand corner of the base of the monitor. The switch is in the "on" position when the small "o" is not visible.

LOGIN/LOGOUT Procedure

If nothing appears on your screen when you turn on your terminal, press RETURN. Within a few seconds, the following prompt should appear on the screen:

(site name) login:

The system is asking for your UNIX login code, which will have been provided by your Site Manager. Enter your code and press RETURN.

ACCESS CODE:

The system is asking for your access code. Type in your access code and press RETURN.

Note that as you type, nothing appears on the screen. This is to prevent anyone from learning your access code by watching you log onto the system.

After you press RETURN, the system will display the following prompt:

VERIFY CODE:

The system requires you to enter your verify code. Type your verify code and press RETURN.

After a few seconds, one of the PCC menus will appear on the screen. The login procedure is controlled by the PCC or Site Manager and access to specific data systems must be authorized. If you are denied access, or if an unfamiliar menu appears on your screen, contact your supervisor or the PCC or Site Manager at once.

When the menu appears, make sure that the keyboard is in the "caps lock" position by checking that the word "lock" appears at the top of the screen. If it is not present on the screen, depress the "Caps Lock" key so that only capital letters are entered.

You may now begin working.

Before turning off your terminal or leaving your workstation, you must LOG OFF the system. This is done by entering HALT and pressing RETURN at any of the PCC menu selection prompts.

Be sure the words LOGGED OFF AT ... or EXITED AT ... or HALTED AT ... appear on the screen before you leave your terminal.

Special LOGIN Procedures

The above procedure will be followed at most locations. However, special circumstances may require different procedures. If access to the PCC or the RPMS system involves logging onto the system through UNIX or via a network, your PCC or Site Manager will provide you with the specific procedure.

STANDARDS AND CONVENTIONS

Certain terms and operating procedures (conventions) have been established for the RPMS. The following is a brief discussion of the conventions that are common to all the components of the system. A knowledge of these will enable you to more effectively learn and use the system. As you read the following explanations, you should refer to your keyboard to insure that you have correctly identified each key or command function.

Keyboard Entry

The keyboard is divided into two main sections. A cluster of keys similar to the keypad on a ten-key adding machine comprise one section. This is located at the right end of the keyboard. The left section of the keyboard resembles a typewriter keyboard with the addition of a number of special keys and symbols. It is this section and its special keys that you will normally be concerned with.

Note that when entering numbers you can use either the numeric keypad on the right or the numeric keys on the top row of the typewriter-like keyboard.

Use Capital Letters Only

All letters and words must be entered in **CAPITAL LETTERS.** If your terminal is not already set up to enter only capital letters, depressing the "Caps Lock" key will limit all subsequent entries to capital letters. Note that the Caps Lock key has no effect on the numeric keys. It affects only the letters a-z.

Return Key

The RETURN key is used to indicate the end of an entry such as a number or a word. It must be pressed after you have entered your response to each prompt or request for data. When you are at a menu selection point, pressing RETURN without entering a response will take you back to the previous menu screen.

Backspace Key

The backspace key allows you to move the cursor "backwards" or to the left, and deletes or erases the character to the left of the cursor.

Space Bar

At certain times, the space bar may be used to tell the system to reuse a previous response or to use previously entered data.

For example, when you are asked to make a selection from a menu of choices, pressing the space bar and RETURN will cause the system to reuse the last selection you made when you were at the same menu. Or, when asked to select a patient, pressing the space bar and RETURN will retrieve the last patient with whom you were working.

Some applications are designed in such a way that the space bar is used at certain data entry points to automatically re-enter the same data that were entered for the same file in the previous record. For example, for Record #1 you respond to the prompt for "Provider" by entering the provider name "Jones,John". If the application is so designed, when entering record #2, you may respond to the prompt for "Provider" by pressing the space bar and RETURN in order to automatically enter "Jones,John" as the provider name without typing the name. The manuals for each RPMS module identify where the space bar can be used in this manner for that particular module.

Hold Screen Key

This key is used to temporarily halt the display of a list of data on your terminal screen. It is located in the upper left corner of the keyboard and is labeled "F1". Pressing the key once will halt the display, allowing you to read the information then on the screen. Pressing it a second time will resume the scrolling of data. In this way you may work your way through a long list of data. **Never leave your terminal with the Hold Screen key in hold position.**

Note: In some modules, as a screen of information is displayed, the display terminal will "beep" and stop. To continue to the next screen of information, you must press RETURN. To discontinue, enter the hat ("^") and press RETURN.

Break Key

The Break Key is not used in the RPMS system.

Special Control Character

A special control character, the "hat" (^) is used to exit from a particular activity or data entry sequence. Entering the "^" at any prompt will usually take you back to the preceding prompt or menu level. The "hat" key may also be used to exit from a data display that is comprised of many screens, such as a list of patients.

The "^" character is entered by depressing the "shift" key and holding it down while pressing the "6" key located at the top of the typewriter keyboard. Note that pressing the shift key and the 6 key on the numeric keypad will not create a "^" character.

Special Delete Character

The "@" symbol is used to delete an existing entry in a file.

To enter the @ symbol, depress the shift key and hold it down while pressing the "2" key at the top of the keyboard. The @ symbol is entered after selecting the record that you wish to delete or when positioned at a specific field that you wish to delete. The system prohibits deletion of certain records or deletion of data contained in certain fields.

Text Editing

Certain data entry fields, such as the "Provider Notes" option, utilize the FileMan Text Editor Kernel. This allows the use of certain text editing conventions to enter or modify the data contained in these fields. Of specific interest is the "REPLACE...WITH" convention, which allows the operator to replace a series of words or letters (commonly referred to as a "string") with another series of words or letters as follows.

To permit the user to change a part of a text string, the system is designed to display a prompt that contains the current value, followed by a prompt for the user to enter any changes.

NAME: JOHN JACOB JINGLEHAEMER SMITH

REPLACE:

The user should enter the text to be replaced. In this example, the entry would be as follows:

NAME: JOHN JACOB JINGLEHAEMER SMITH

REPLACE: AE

The system will respond with a prompt for the replacement string:

REPLACE: AE WITH

The user responds by entering the replacement string

REPLACE: AE WITH EI

The system then displays the corrected data

JOHN JACOB JINGLEHEIMER SMITH

Pressing RETURN at the REPLACE prompt will end the correction process.

Text replacement conventions are as follows:

A) ABC...XYZ means that the string beginning with the character sequence ABC and ending with the character sequence XYZ: the sequences may be one or more characters long.

B) ABC... means the string beginning with the character sequence ABC and ending at the end of the line.

C) ...XYZ means the string beginning at the start of the line and ending with the sequence XYZ.

D) ... means that the entire line is to be replaced.

E) END means the replacement text is to be added at the end of the existing text.

Note: The replacement text may be a blank, which has the effect of deleting the specified text.

Note: On-line help is available for the REPLACE...WITH function by entering a ? at the prompt.

Using the "Help Displays"

Special help displays are available for most menu options and data entry prompts. Entering a single "?" at a data entry prompt will produce instructions for entering the requested data. Entering two "??" will cause the system to display a more complete help message. For some prompts a list of available choices will be displayed.

When you are asked to choose from a menu of options, entry of three question marks, ???, will provide a brief description of each option on the menu. Entry of a ? followed by the option number or name will cause the system to display a more detailed description of that particular option if help screens are available for that option.

General Keyboard Tips

Note that all MUMPS commands will only work if entered in capital letters. Therefore, it is very important that your Caps Lock key is always engaged.

If you attempt to enter an incorrect value, or strike an invalid key combination, the system will "beep" at you to alert you to the error. This will generally be followed by a message indicating the error or requesting that the correct information be entered.

General Computer Terms and Conventions

When the computer prompts you for a reply, it will follow the prompt with either a single slash, " / ", or a double slash, " // ". When you see a single slash, you must always key in a response or press the space bar if the prompt will accept a previously entered value, such as a date or name.

If the system prompt is followed by a computer-generated value and a double slash, that value may be entered by "default" simply by pressing RETURN.

For example, when prompted to respond to a YES or NO question, you might see the following display:

DO YOU WISH TO CONTINUE? YES//

The system has generated a default value of YES and, if you wish to accept YES as your answer, you may simply press RETURN. If you wish to enter a NO response, you must type NO and press RETURN.

Time and Date Conventions

When a system prompt calls for the entry of a specific date or time, there are several ways that the information may be entered.

Date

Simply entering a T in response to a date prompt will cause the system to use the current date. Entering T with a + or - value will cause the system to use a value of today's date plus or minus the indicated number of days. For example, if the current date is May 20, 1988, entering T-10 would cause the system to use a date of May 10, 1988.

Dates may be entered explicitly in a number of ways. To enter May 20, 1988, you could also type 20 May, 1988; 05/20/88 or 05-20-88. Generally it is best to select one style of date entry and use it all the time. Choose the form that you find easiest to work with.

Time

Time may also be entered in several ways. Unless otherwise indicated, the system assumes that all times fall between the hours of 6 a.m. and 6 p.m. Thus if you enter 3 in response to a time prompt, the system will convert this to 3:00 p.m. An entry of 9 will become 9:00 a.m. If you need to enter a time such as 9:00 p.m., you must type in the entire entry.

Date/Time

A combined Date/Time field is entered using the above convention with an "@" symbol between the date and time. For example, if the current date was May 20, 1988, and you wished to make an entry using that date and a time of 3:00 p.m, you could enter the information in any of the following ways:

5/20/88 @ 3

052088 @ 3:00 PM

T @ 3:00

Any valid entry format for the date and time may be used together and linked by the "@" symbol.

Special Terms and Words

There are a number of words and terms you should also be familiar with. Many of these may be familiar to you. However, when used in discussing computers and the PCC, they are given special meanings. The following glossary defines most of the words and terms you will need to know.

Default Value - As explained above, this is a "normal" or "usual" value that is generated by the computer and is entered into the system if the operator simply presses RETURN.

Delete - When anything is erased or removed from the computer it is **deleted**. The term is most commonly used to refer to the process of erasing, or **deleting**, words or letters on the terminal screen while information is being entered.

Display - To show information through one or more output devices. Generally information is **displayed** on the terminal screen, but it may also be **displayed** through a printer.

Execute - When a computer carries out a specific command, it has **executed** that command. The term is also used to describe the entry of a command by the operator; i.e., when you type ENT at the Data Entry menu prompt, you are **executing** that option.

Generate - To create a record in the computer system. When the Data Entry operator enters the information from an Ambulatory Encounter Form, a Patient Visit Record is **generated**.

Help Screens - Help screens provide the user with a brief description of the information or actions that need to be entered or carried out. New operators will find them very useful, especially when working with some of the less common forms and commands.

HOME - When a prompt indicates or refers to the HOME device, it is referring to your terminal. When you request a display of data, always indicate that the output device is to be the HOME device unless you intend to route the information to another terminal or a printer.

ICD9 Coding - The RPMS system utilizes the ICD9 Coding system for identification of all medical conditions. It is important for system users, especially Data Entry Operators, to familiarize themselves with this system and related medical terminology. Although the system is designed to automatically generate the ICD9 Code for most conditions, based on the providers description, the system may not always be able to do so, and the operator will have to choose from several alternatives or retype the information using different terminology to locate the correct code.

Mnemonic - This refers to a two- or three-letter character set that is used to indicate a class, function, title, or operation. For example, the letters **PCC** are a mnemonic for the name **P**atient **C**are **C**omponent. The RPMS makes extensive use of mnemonics to facilitate data entry and retrieval. Lists of mnemonics associated with particular modules will be found in the appropriate manuals.

Option - This is simply another word for an action that the operator selects. The Enter Data function that appears on the Data Entry menu is an **option**.

Purge - When something is purged it is erased from the computer.

Submenus - When the operator selects certain items from a menu, a second menu may appear. Such a menu will contain actions relating to the item chosen on the main menu.

Transaction - An entry or group of entries relating to a single event. Data entered describing a specific visit by a patient would be a single **transaction**.